

## Remarks

Claims 1-10, 12-13, and 15-18 are pending in the application. Claims 1-5, 7-10, 12-13 and 16-18 have been amended. Reconsideration and re-examination of the application is respectfully requested for the reasons set forth herein.

1. The Examiner has rejected claims 16-18 under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,380,485 issued to Beaman et al.

With regard to claim 16, the Examiner stated that Beaman et al. discloses an electrical cable terminal part comprising an electrical cable 810 having a signal drain wire 811 and differential transmission signal wires 814, 815 with a differential impedance. The electrical cable 810 has a stripped end 812, 813 that exposes an outer surface of the wires. A tube 816 is positioned over a portion of the electrical cable 810 and a portion of the outer surface of the wires 811, 814, 815 that maintains the differential impedance of the wires 811, 814, 815 having an exposed outer surface. The tube 816 is positioned such that front end portions of the differential transmission signal wires 814, 815 are receivable on a second side of a circuit board.

Claim 16 has been amended to recite that the electrical cable terminal part structure has front end portions of the differential transmission signal wires attached to a first side of a circuit board and a front end portion of the drain wire attached to a second side of the circuit board. Unlike the claimed invention, Figure 8 of Beaman et al. teaches two signal wires 812, 813 and a drain wire 811 soldered to the same side of the printed circuit card 804. The drain wire 811 is arranged such that it is positioned directly next to one of the two signal wires 812 when it is soldered to the printed circuit card 804. Beaman et al., therefore, does not teach all of the

elements of claim 16. Removal of the rejection of claim 16 under 35 U.S.C. 102(e) is respectfully requested.

Claims 17 and 18 have been amended to correct antecedent basis and depend from independent claim 16. As previously discussed, Beaman et al. does not teach all of the elements of claim 16. Because Beaman et al. does not teach all of the elements of claim 16, Beaman et al. does not teach all of the elements of claims 17 and 18. Further, Beaman et al. does not teach a drain wire attached at an equal distance from the differential transmission signal wires as recited by claim 17. As shown in Figure 8 of Beaman et al., Beaman et al. teaches a drain wire 811 attached to a circuit card 804 such that it is positioned directly next to one of the two signal wires 812 when it is soldered thereto. Beaman et al., therefore, teaches away from the required structure of claim 17. Removal of the rejection of claims 17 and 18 under 35 U.S.C. 102(e) is respectfully requested.

2. The Examiner has rejected claims 1-10, 12-13 and 15 under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,380,485 B1 issued to Beaman et al. in view of US Patent No. 5,371,322 issued to Selmeski.

a. With regard to claim 1, the Examiner stated that Beaman et al. discloses all the elements of claim 1 as previously discussed, except the tubing being a heat-shrink tube covering. The Examiner further stated that Selmeski teaches a heat-shrink tubing for securing wires together.

Claim 1 has been amended to correct grammatical errors and to recite that the structure for terminating an electrical cable with a circuit board has front end portions of the differential transmission signal wires positioned on a first side of the circuit board and front end portion of

the drain wire positioned on a second side of the circuit board. This arrangement maintains the mechanical balance of the structure and thereby prevents unwanted stress in the heat-shrink tube and/or unwanted bending of the wires. Additionally, the differential impedance of the wires having an exposed outer surface is maintained.

As previously discussed, Beaman et al. teaches two signal wires 812, 813 and a drain wire 811 soldered to the same side of a printed circuit card 804. Selmeski is silent as to attaching wires to a circuit board. Because neither Beaman et al. nor Selmeski teaches differential transmission signal wires positioned on a first side of a circuit board and a drain wire positioned on a second side of the circuit board, the combination of Beaman et al. or Selmeski, therefore, does not teach all of the elements of claim 1. Additionally, Beaman et al. teaches away from the desired structure by arranging the drain wire 811 on the same side of the circuit board as the two signal wires 812, 813. As such, the mechanical balance of the structure is jeopardized and the differential impedance of the two signal wires 812, 813 in relation to the drain wire 811 prior to termination and at termination is not maintained. Because the combination of Beaman et al. in view of Selmeski neither teaches nor suggests all of the elements of claim 1, removal of the rejection of claim 1 under 35 U.S.C. 103(a) is respectfully requested.

Claims 2-5 and 7-10, 12-13 have been amended to correct antecedent basis and grammatical errors. Claims 2-5 and 7-10, 12-13 depend from independent claim 1. As previously discussed, the combination of Beaman et al. in view of Selmeski neither teaches nor suggests all of the elements of claim 1. Because the combination of Beaman et al. in view of Selmeski neither teaches nor suggests all of the elements of claim 1, the combination of Beaman et al. in view of Selmeski neither teaches nor suggests all of the elements of claims 2-5 and 7-10, 12-13. Further, neither Beaman et al. nor Selmeski teach or suggest positioning the drain wire

on the circuit board at an intermediate point between the differential transmission signal wires as required by claim 12. In fact, Beaman et al. teaches away from this arrangement in Figure 8 where the drain wire 811 is positioned directly next to only one of the signal wires 812 when it is soldered to the printed circuit card 804. Removal of the rejection of claims 2-5 and 7-10, 12-13 under 35 U.S.C. 103(a), therefore, is respectfully requested.

b. With regard to claims 6 and 15, the Examiner stated that the method is inherent to the device and is rejected on the same grounds as the device.

Claim 6 recites that the method includes attaching the front end portions of the differential transmission signal wires on a first side of a circuit board and the front end portion of the drain wire on a second side of the circuit board. As previously discussed, neither Beaman et al. nor Selmeski teaches differential transmission signal wires positioned on a first side of a circuit board and a drain wire positioned on a second side of the circuit board. Additionally, Beaman et al. teaches away from the desired structure by arranging the drain wire 811 on the same side of the circuit board as the two signal wires 812, 813. As such, the mechanical balance of the structure is jeopardized and the differential impedance of the two signal wires 812, 813 in relation to the drain wire 811 prior to termination and at termination is not maintained. Because the combination of Beaman et al. in view of Selmeski neither teaches nor suggests all of the elements of claim 6, the Examiner has failed to set forth a *prima facie* case of obviousness. Removal of the rejection of claim 6 under 35 U.S.C. 103(a) is respectfully requested.

Claim 15 depends from independent claim 6. As previously discussed, the combination of Beaman et al. in view of Selmeski neither teaches nor suggests all of the elements of claim 6. Because the combination of Beaman et al. in view of Selmeski neither teaches nor suggests all of the elements of claim 6, the combination of Beaman et al. in view of Selmeski neither teaches

nor suggests all of the elements of claim 15. Further, neither Beaman et al. nor Selmeski teach or suggest attaching the drain wire at an intermediate point between the differential transmission signal wires as required by claim 15. As previously discussed, Beaman et al. teaches away from this arrangement in Figure 8 where the drain wire 811 is positioned directly next to only one of the signal wires 812 when it is soldered to the printed circuit card 804. Removal of the rejection of claim 15 under 35 U.S.C. 103(a), therefore, is respectfully requested.

In view of the arguments and amendments presented herein, the application is considered to be in condition for allowance. Reconsideration and passage to issue is respectfully requested.

Please charge any additional fees associated with this application to Deposit Order Account No. 501581.

Respectfully submitted,  
Masayuki Aizawa, Applicant



Jennifer M. Slonaker  
Registration No. 50568  
Attorney for Applicant  
Phone: 717.399.1535  
Facsimile: 717.291.4660